

*Soft View International Technology Co.,Ltd.*

Document Title

LTD121LA3SG-201

Page No.

01/21

Revision

1.0

Model : LTD121LA3SG-201

The information contained herein is preliminary and may be changed without prior notices. Please contact Soft View International Technology. before designing your product based on this module specification. The information contained herein is presented merely to indicate the characteristics and performance of our products. No responsibility is assumed by HannStar for any intellectual property claims or other problems that may result from application based on the module described herein.

The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.



Soft View International Technology Co., Ltd.

Page No. 02/21

Document Title

LTD121LA3SG-201

Revision

1.0

Record of Revisions

Date	Rev.	Item	Old	New	Reason

The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.



Soft View International Technology Co.,Ltd.

Document Title

LTD121LA3SG-201

Page No.

03/21

Revision

1.0

- Contents -

1.	Product General descriptions	4
2.	Absolute maximum ratings	5
3.	Electrical characteristics	6
4.	Block diagram	7
5.	Interface pin connection	9
6.	Interface timing	13
7.	Optical characteristics	15
8.	Outline dimension	16
9.	Lot mark	17
10.	Quality	18
11.	Packaging	21

The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.



Soft View International Technology Co.,Ltd.

Page No. 04/21

Document Title

LTD121LA3SG-201

Revision

1.0

SCOPE

This specification is applicable to Toshiba's 31.0cm diagonal size TFT-LCD module "LTD121LA1SG-201" designed for AV/TV.

FEATURES

- (1) 12.1"XGA(1024x768 pixels) display size for AV/TV
- (2) SPWG-B dimension
- (3) LVDS interface system(H-Sync, V-Sync)
- (4) P-Si TFT-LCD Module

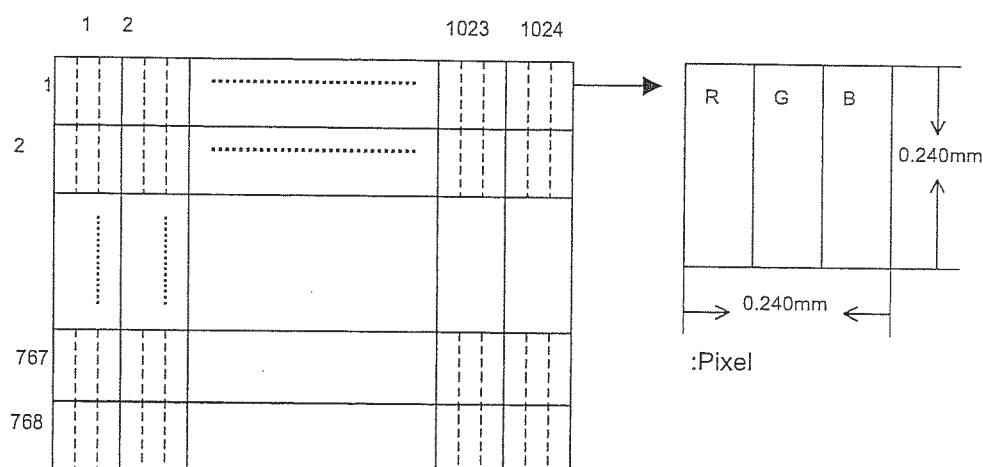
Applications

Multimedia player
New media equipment
OA equipment
Display terminals

{ 希望加註說明:
< 1/2 dot 不列入失敗判定 } }

General information

Item	Specifications
Display Mode	TN color (64gray scales, 262,144 color)
Viewing Direction	6 o'clock(in direction of maximum contrast)
Driving Method	TFT active matrix
Input Signals	LVDS interface
Active Area	245.76(W) × 184.32(H) mm
Bezel Opening	250.4(W) × 188.9(H) mm
Number of Pixels	1024(W) × 768(H)
Pixel Pitch	0.240(W) × 0.240 (H) mm
Pixels Arrangement	R G B vertical stripes
Surface Treatment	Anti-Reflection and hard coat 3H on LCD surface
Backlight	1 CCFL



The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.



Soft View International Technology Co., Ltd.

Page No. 05/21

Document Title

LTD121LA3SG-201

Revision 1.0

Absolute Maximum Rating

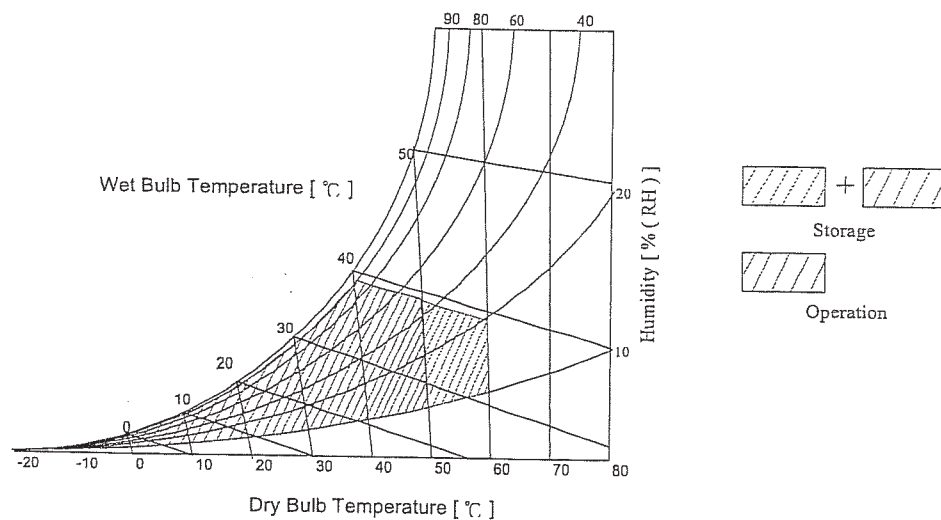
Absolute Rating of Environment

Item	Symbol	Min	Max	Unit	Checked Terminal 4)
Supply Voltage	V_{DD}	-0.3	4.0	V	$V_{DD} - GND$
Input Signal Voltage	V_{IN}	-0.3	$V_{DD} + 0.3$	V	LVDS Interface
Operating Ambient Humidity 2)	H_{OP}	10	90	%(RH)	
Storage Temperature 2)	T_{STG}	-20	60	°C	
Storage Humidity 2)	H_{STG}	10	90	%(RH)	
Operating Ambient Temperature 2)	T_{OP}	0	50	°C	
Operating Temperature of Panel 3)	--	0	60	°C	

Note 1) Do not exceed the maximum rating values under the worst probable conditions taking into account the supply voltage variation, input voltage variation, variation in part constants, and ambient temperature and so on. Otherwise the module may be damaged.

Note 2) Wet bulb temperature should be 39°C Max, and no condensation of water. See figure below.

Note 3) The surface temperature caused by self heat radiation of cell itself is specified on this item.



The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.



Soft View International Technology Co.,Ltd.

Page No. 06/21

Document Title LTD121LA3SG-201

Revision 1.0

Electrical Characteristics

Item	Symbol	Min	Typ	Max	Unit	Remarks
Supply Voltage 4)	VDD	3.0	3.3	3.6	V	
Differential Input Voltage 2)4)	V _{ID}	0.1	--	0.6	V	
Common Mode Input Voltage 5)	V _{CM}	1.0	--	2.4-1/2xV _{ID}	V	
Current Consumption	I _{DD}	--	235	--	mA	*1
FL Input Current 6)7)8)	I _{FL}	2.0	6.0	6.5	mA(rms)	*2
FL Driving Voltage 6)	V _{FL}	--	546	--	V(rms)	I _{FL} =6.0mA(rms)
FL Driving Frequency 6)10)	f _{FL}		32.3	--	kHz	
FL Starting Voltage 6)9)	V _{SFL}	--	740	770	V(rms)	24.5°C
*1 *2 Power Consumption		--		--	W	I _{FL} =6.0mA(rms)

Refer to THC63LVDF84A Specification by Thine Electronics, Inc.

*1 : 8 color bars pattern. *2 : Excepting the efficiency FL inverter

Note 1) The module should be always operated within these ranges. The "Typ" shows the recommendable value.

Note 2) Recommended LVDS transmitter: THC63LVDM83A (made by Thine Electronic, Inc.)

LVDS receiver included in this module is THC63LVDM83A (made by Thine Electronic, Inc.)

Refer to LVDS specifications.

Note 3) Checked pin Terminal: V_{DD}, GND (0V)

Note 4) Checked pin Terminal: IN0+/-, IN1+/-, IN2+/-, CLK+/-, GND(0V)

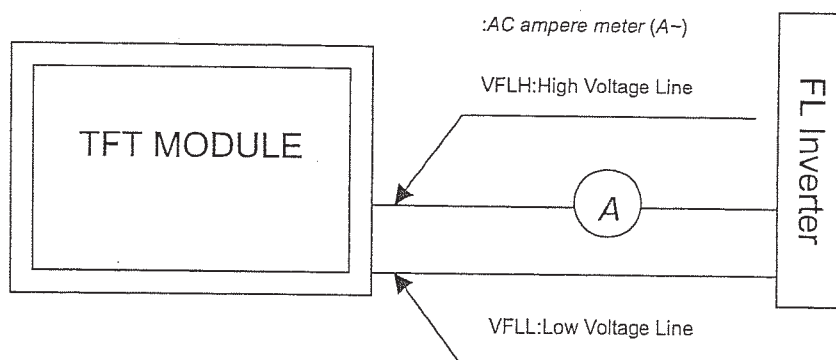
Measure: |V_{IND+} V_{IND-}|, |V_{IN1+} V_{IN1-}|, |V_{IN2+} V_{IN2-}|, |V_{CLK+} V_{CLK-}|

Note 5) Checked pin Terminal: IN0+/-, IN1+/-, IN2+/-, CLK+/-, GND(0V)

Measure: 1/2x(V_{IND+} V_{IND-}), 1/2x(V_{IND+} V_{IND-}), 1/2x(V_{IND+} V_{IND-}), 1/2x(V_{CLK+} V_{CLK-})Note 6) Checked pin Terminal: V_{FLH} - V_{FLL}Note 7) If FL input current (I_{FL}) is higher than typical value (6.0mA(rms)), then FL lifetime becomes shorter.Note 8) Measuring Method of I_{FL}.Note 9) Input FL starting voltage (V_{SFL}) should not be less than one second.

If it were less than one second, it may cause unstable operation of FL.

Note 10) Please adjust LCD operating signal timing and FL driving frequency, to optimize the display quality. There is a possibility that flicker is observed by the interference of LCD operating signal timing and FL driving condition (especially driving frequency), even if the condition satisfies above recommended operating conditions and timing specification shown in 6.



The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.



Soft View International Technology Co.,Ltd.

Document Title

LTD121LA3GV201

Page No. 07/21

Revision 1.0

Block Diagram

憶聲電子股份有限公司

呈: 李協理

CC: 會計處

2004 年 06 月 06 日

ACV 廠務處

門素惠 發行者

件 名: LCD-104Q 試作品拆機,回收 PANEL 轉售事由

一、說明: 1.LCD-104Q 成品倉庫存 3 台為試作品,今 LCD-104Q 已不再接單生產,而 RADIOSHACK 售服需求 10" PANEL,廠內 10" PANEL 已無

CN1 庫存

DC/DC
Gray scale
Manipulation
Voltage
Generation
Circuit

driver

1024 x 768 pixels

driver

2.擬拆機回收 PANEL 轉售 RADIOSHACK

二、辦法 1.LCD104Q-ONN100 3 台 金額 NT:4 萬

Connector

拆機回收 PANEL/PCB ASS'Y/EAR PHONE/ADP/

REM,餘材料報廢

Back-Light

CN2

預計回收金額約 NT: 1.9 萬元

3.拆機預估損失 金額 NT:2.1 萬元

1024 pixels

三、以上核准後執行.

1,1	2,1	X,1	1024,1
1,2		ACTION	
		1/1	
1,Y		X,Y	
1,768			1024,768

768 pixels

The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.



Soft View International Technology Co.,Ltd.

Page No. 08/21

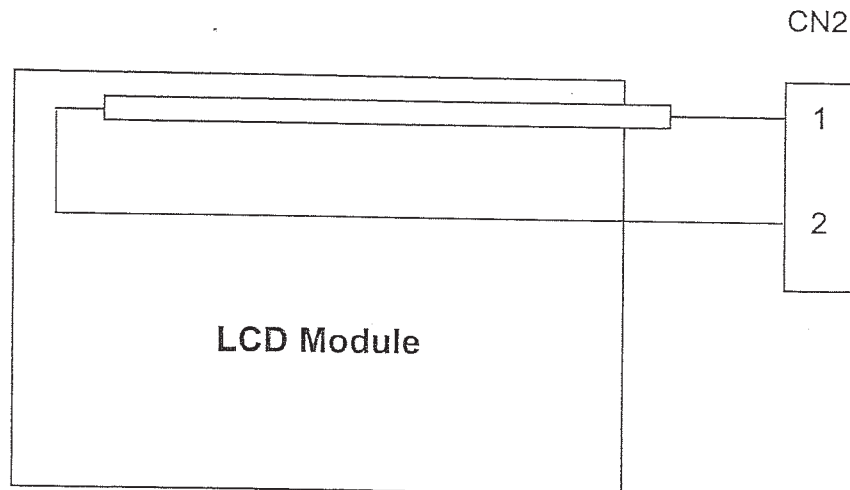
Document Title

LTD121LA3SG-201

Revision

1.0

Back-Light Unit



Connector 2:

1. V_{FL1}
2. G_{FL1}

Lamp Lifetime

Ambient Temperature : $25 \pm 2^{\circ}\text{C}$

Lamp Current : 6.0mA

Lamp Lifetime	>10000hr
ON/OFF Lifetime	>10000 times (30sec ON – OFF)

Lamp Maximum Specification

Item	Symbol	Min.	Max	Unit
Lamp voltage	V_{FL}	-	750	V
Lamp current	I_{FL}	-	7	mA
Lamp frequency	f_{FL}	47.0	100.0	KHz

Permanent damage may occur to the LCD module if beyond this specification. Functional operation should be restricted to the conditions described under normally operating conditions.

The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.



Soft View International Technology Co.,Ltd.

Page No. 09/21

Document Title LTD121LA3SG-201

Revision 1.0

Connector Pin Assignment For Interface

CN1 Input Signal

Connector :DF19L-20P-1H / HIROSE

Mating Connector :DF19G-20S-1C(Cable Type)DF19G-20S-1F(FPC Type) / HIROSE

Terminal No.	Symbol	Function
1	V _{DD}	POWER SUPPLY :+3.3V
2	V _{DD}	POWER SUPPLY :+3.3V
3	GND	GND
4	GND	GND
5	RxIN0-	Negative LVDS differential data input,[R0-R5, G0]
6	RxIN0+	Positive LVDS differential data input,[R0-R5, G0]
7	GND	GND
8	RxIN1-	Negative LVDS differential data input,[G1-G5, B0-B1]
9	RxIN1+	Positive LVDS differential data input,[G1-G5, B0-B1]
10	GND	GND
11	RxIN2-	Negative LVDS differential data input,[B2-B5, HS, VS, DE]
12	RxIN2+	Positive LVDS differential data input,[B2-B5, HS, VS, DE]
13	GND	GND
14	CLK-	Color signal()
15	CLK2	Color signal(+)
16	GND	GND
17	NC	
18	NC	
19	GND	GND
20	GND	GND

Note 1) Please connect NC pin to nothing. Don't connect it to grand nor to other signal input.

Please connect GND to ground. Don't use it as no-connent nor connection with high impedance.

Note 2) 262,144 colors are displayed by the combinations of 18 bits data. (See next page)

CN2 CCFL Power Source

Connector:

Mating Connector:

Terminal No.	Symbol	Function
1	V _{FL1}	CCFL Power Supply (high voltage)
2	V _{FL2}	CCFL Power Supply (high voltage)
3	G _{FL1}	CCFL Power Supply (low voltage)

The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.



Soft View International Technology Co., Ltd.

Page No. 10/21

Document Title LTD121LA3SG-201

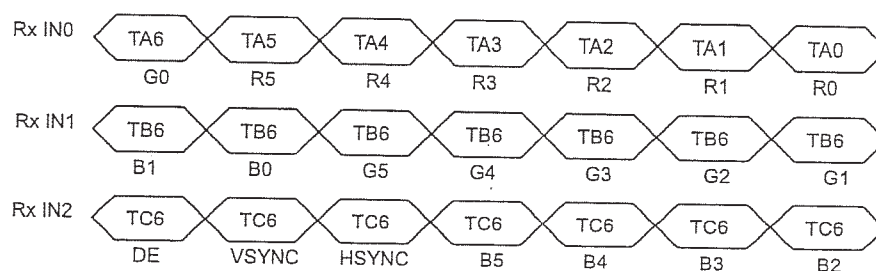
Revision 1.0

Recommended Transmittre To LTD121LA3SG-201 Interface Assignment

Case 1: 6bit Transmitter

THC63LVDF63A, THC63LVDM63A, THC63LVDM63A-85				LTD121LA3SG-201 Interface (CN)	
Input Terminal No.		Input Signal (Graphics controller output signal)		Output Signal Symbol	Terminal
Symbol	Terminal	Symbol	Function		Symbol
TA0	44	R0	Red Pixels Display Data(LSB)	TA- TA+	No.5 No.6
TA1	45	R1	Red Pixels Display Data		
TA2	47	R2	Red Pixels Display Data		
TA3	48	R3	Red Pixels Display Data		
TA4	1	R4	Red Pixels Display Data		
TA5	3	R5	Red Pixels Display Data(MSB)		
TA6	4	G0	Green Pixels Display Data(LSB)	TB- TB+	No.8 No.9
TB0	6	G1	Green Pixels Display Data		
TB1	7	G2	Green Pixels Display Data		
TB2	9	G3	Green Pixels Display Data		
TB3	10	G4	Green Pixels Display Data		
TB4	12	G5	Green Pixels Display Data(MSB)		
TB5	13	B0	Blue Pixels Display Data(LSB)	TC- TC+	No.11 No.12
TB6	15	B1	Blue Pixels Display Data		
TC0	16	B2	Blue Pixels Display Data		
TC1	18	B3	Blue Pixels Display Data		
TC2	19	B4	Blue Pixels Display Data		
TC3	20	B5	Blue Pixels Display Data(MSB)		
TC4	22	HSYNC	Horizontal Synchronized Signal	TCLK- TCLK+	No.14 No.15
TC5	23	VSYNC	Vertical Synchronized Signal		
TC6	25	DE	Compound Synchroization Signal		
CLK IN	26	NCLK	Data Sampling Clock		CLK- CLK+

Note 1) please refer to LVDS transmitter (THC63LVDF63A, THC63LVDM63A, THC63LVDM63A-85) specification by Thine



The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.



Soft View International Technology Co., Ltd.

Page No. 11/21

Document Title LTD121LA3SG-201

Revision 1.0

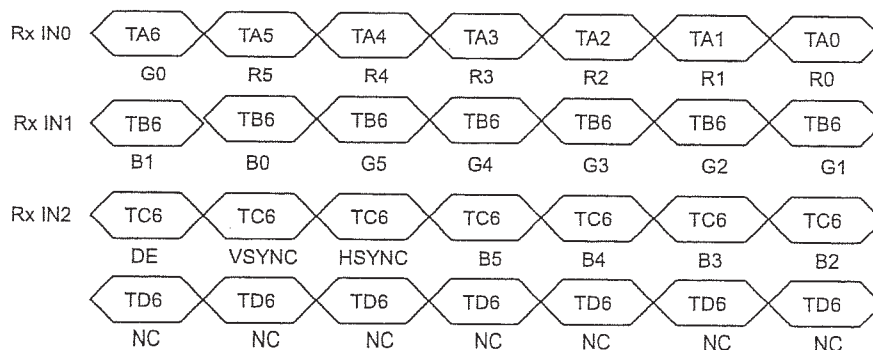
Recommended Transmittre Interface Assignment

Case 2: 8bit Transmitter

THC63LVDF83A, THC63LVDM83A, THC63LVDM83A-85				LTD121LA3SG-201 Interface (CN1)		
Input Terminal No.		Input Signal (Graphics controller output signal)		Output Signal Symbol	Terminal	Symbol
Symbol	Terminal	Symbol	Function			
TA0	51	R0	Red Pixels Display Data(LSB)	TA- TA+	No.5 No.6	RxIN0- RxIN0+
TA1	52	R1	Red Pixels Display Data			
TA2	54	R2	Red Pixels Display Data			
TA3	55	R3	Red Pixels Display Data			
TA4	56	R4	Red Pixels Display Data			
TA5	3	R5	Red Pixels Display Data(MSB)			
TA6	4	G0	Green Pixels Display Data(LSB)	TB- TB+	No.8 No.9	RxIN1- RxIN1+
TB0	6	G1	Green Pixels Display Data			
TB1	7	G2	Green Pixels Display Data			
TB2	11	G3	Green Pixels Display Data			
TB3	12	G4	Green Pixels Display Data			
TB4	14	G5	Green Pixels Display Data(MSB)			
TB5	15	B0	Blue Pixels Display Data(LSB)	TC- TC+	No.11 No.12	RxIN2- RxIN2+
TB6	19	B1	Blue Pixels Display Data			
TC0	20	B2	Blue Pixels Display Data			
TC1	22	B3	Blue Pixels Display Data			
TC2	23	B4	Blue Pixels Display Data			
TC3	24	B5	Blue Pixels Display Data(MSB)			
TC4	27	HSYNC	Horizontal Synchronized Signal	TD- TD+	-----	-----
TC5	28	VSYNC	Vertical Synchronized Signal			
TC6	30	DE	Compound Synchroization Signal			
TD0	50	NC	Non Connection (open)			
TD1	2	NC	Non Connection (open)			
TD2	8	NC	Non Connection (open)			
TD3	10	NC	Non Connection (open)	TCLK- TCLK+	No.14 No.15	CLK- CLK+
TD4	16	NC	Non Connection (open)			
TD5	18	NC	Non Connection (open)			
TD6	25	NC	Non Connection (open)			
CLK IN	31	NCLK	Data Sampling Clock			

Note 1) Please connect NC pin to nothing. Don't connect it to ground nor to other signal input.

Note 2) Please refer to LVDS transmitter (THC63LVDF83A, THC63LVDM83A, THC63LVDM83A-85) specifications by Thine Electronics, Inc.



The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.



Soft View International Technology Co.,Ltd.

Page No. 12/21

Document Title

LTD121LA3SG-201

Revision

1.0

Colors Combination Table (262,144 color)

	Display	R5 R4 R3 R2 R1 R0	G5 G4 G3 G2 G1 G0	B5 B4 B3 B2 B1 B0	Gray Scale Level
Basic Color	Black	L L L L L L	L L L L L L	L L L L L L	
	Blue	L L L L L L	L L L L L L	H H H H H H	
	Green	L L L L L L	H H H H H H	L L L L L L	
	Light Blue	L L L L L L	H H H H H H	H H H H H H	
	Red	H H H H H H	L L L L L L	L L L L L L	
	Purple	H H H H H H	L L L L L L	H H H H H H	
	Yellow	H H H H H H	H H H H H H	L L L L L L	
Gray Scale of Red	White	H H H H H H	H H H H H H	H H H H H H	
	Black	L L L L L L	L L L L L L	L L L L L L	L0
	Dark	L L L L L H	L L L L L L	L L L L L L	L1
		L L L L H L	L L L L L L	L L L L L L	L2
					L3.....L60
	Light	H H H H L H	L L L L L L	L L L L L L	L61
		H H H H H L	L L L L L L	L L L L L L	L62
		H H H H H H	L L L L L L	L L L L L L	Red L63
Gray Scale of Green	Black	L L L L L L	L L L L L L	L L L L L L	L0
	Dark	L L L L L L	L L L L L H	L L L L L L	L1
		L L L L L L	L L L L H L	L L L L L L	L2
					L3.....L60
	Light	L L L L L L	H H H H L H	L L L L L L	L61
		L L L L L L	H H H H H L	L L L L L L	L62
		L L L L L L	H H H H H H	L L L L L L	Green L63
Gray Scale of Blue	Black	L L L L L L	L L L L L L	L L L L L L	L0
	Dark	L L L L L L	L L L L L L	L L L L L H	L1
		L L L L L L	L L L L L L	L L L L H L	L2
					L3.....L60
	Light	L L L L L L	L L L L L L	H H H H L H	L61
		L L L L L L	L L L L L L	H H H H H L	L62
		L L L L L L	L L L L L L	H H H H H H	Blue L63
Gray Scale of White & Black	Black	L L L L L L	L L L L L L	L L L L L L	L0
	Dark	L L L L L H	L L L L L H	L L L L L L	L1
		L L L L H L	L L L L H L	L L L L L L	L2
					L3.....L60
	Light	H H H H L H	H H H H L H	H H H H L H	L61
		H H H H H L	H H H H H L	H H H H H L	L62
		H H H H H H	H H H H H H	H H H H H H	White L63

The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.



Soft View International Technology Co., Ltd.

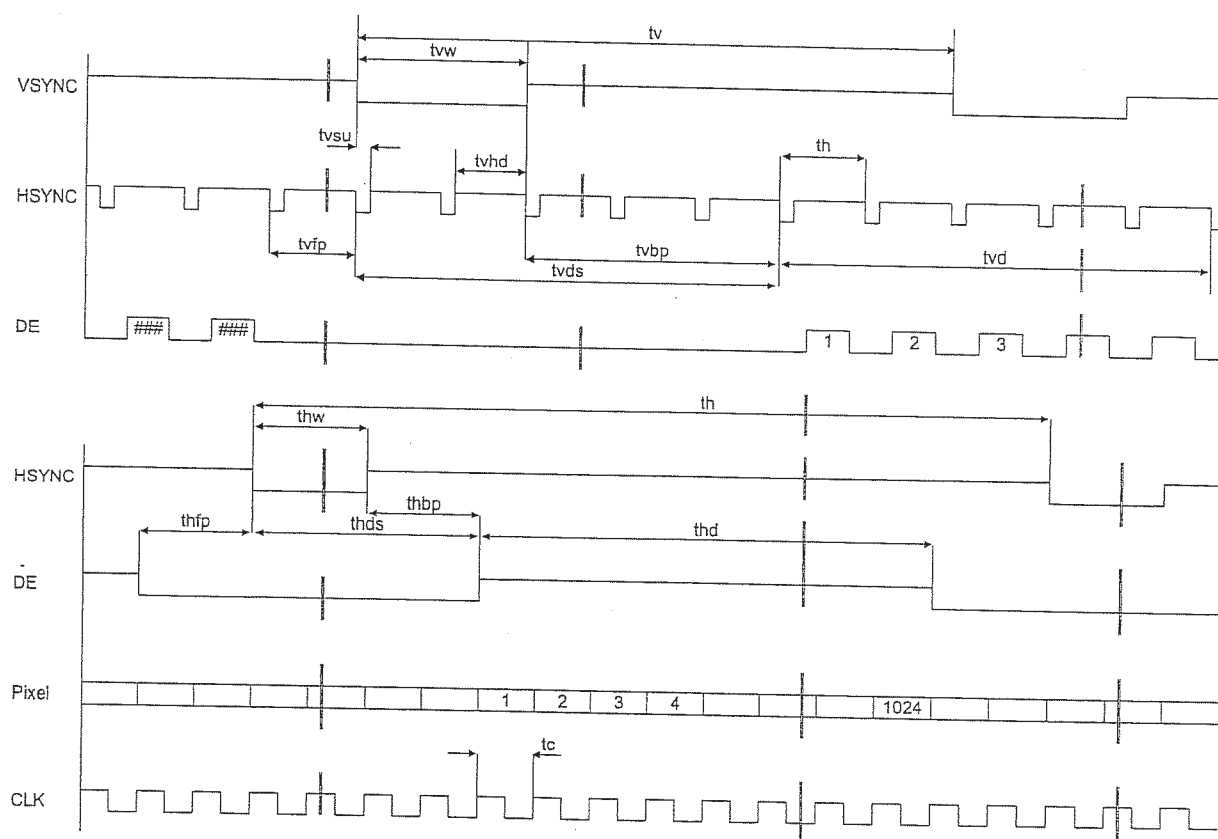
Page No. 13/21

Document Title LTD121LA3SG-201

Revision 1.0

Interface timing

Timing Chart



The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.



Soft View International Technology Co.,Ltd.

Page No. 14/21

Document Title LTD121LA3SG-201

Revision 1.0

Timing Specification

Item	Symble	Min	Typ	Max	Unit
Horizontal Scanning Term	th	1334x _{tc}	1344x _{tc}	--	clock
H-sync Pulse Width	thw	4x _{tc}	136x _{tc}	--	clock
Horizontal Front Porch	thfp	4x _{tc}	24x _{tc}	--	clock
Horizontal Back Porch	thbp	24x _{tc}	160x _{tc}	--	clock
Horizontal Data Sync Period	thds	32x _{tc}	296x _{tc}	--	clock
Horizontal Display Term	thd	1024x _{tc}	1024x _{tc}	1024x _{tc}	clock
Frame Period	tv	--	806x _{th}	--	line
Frame Frequency	1/tv	60	60	60	Hz
V-sync Pulse Width	tvw	2x _{th}	6x _{th}	--	line
V-sync Set Up Time(to H-sync)	tv _{su}	8x _{th}	--	--	clock
V-sync Hold Time	tv _{hd}	(thbp+16)x _{th}	--	--	clock
Vertical Front Porch	tvfp	1x _{th}	3x _{th}	--	line
Vertical Back Porch	tvbp	2x _{th}	29x _{th}	--	line
Vertical Data Sync Period	tvds	8x _{th}	35x _{th}	--	line
Vertical Display Term	tvd	768x _{th}	768x _{th}	768x _{th}	line
Clock Period	tc	15.0	15.38	--	ns

Note 1) Refer to "Timing Chart" and LVDS (THC63LVDF84A-85) specifications by Thine Electronics, Inc.

Note 2) If NCLK is fixed to "H" or "L" level for certain period while V_{DD} is supplied, the panel may be damaged.

Note 3) Please adjust LCD operating signal timing and FL driving frequency, to optimize the display quality.

There is a possibility that flicker is observed by the interference of LCD operating signal timing and FL driving condition (especially driving frequency), even if the condition satisfies above timing specifications.

Note 4) Do not make tv, tv_{hd} and tvds fluctuate. If tv, tv_{hd}, and tvds are fluctuate, the panel display black.

Note 5) In case of using the long frame period, the deterioration of display quality, noise etc. may be occurred.

Note 6) NCLK count of each Horizontal Scanning Time should be always the same.

V-Blanking period should be "n" × "Horizontal Scanning Time". (n: integer)

Frame period should be always the same.

The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.



Soft View International Technology Co.,Ltd.

Page No. 15/21

Document Title LTD121LA3SG-201

Revision 1.0

Optical characteristics

Item		Symble	Conditions	Specification			Unit	Remark
				Min	Typ	Max		
Viewing Angle		θ	$CR \geq 10$	$\phi = 180^\circ$	10	-	-	/
				$\phi = 0^\circ$	30	-	-	/
				$\phi = 90^\circ$	30	-	-	/
				$\phi = -90^\circ$	30	-	-	/
Contrast Ratio		CR	$\theta = 0^\circ, \phi = 0^\circ$	-	200	-	/	
Response Time		t_{ON}	$\theta = 0^\circ, \phi = 0^\circ$	-	-	50	ms	
		t_{OFF}		-	-	50	ms	
Luminance		L	$\theta = 0^\circ, \phi = 0^\circ X=0.2890, Y=0.2880$	160	200	-	cd/m ²	/FL=6.0mA(rms)
Chromaticity	Red	XR	Gray Scale Level:L63 $\theta = 0^\circ, \phi = 0^\circ$	0.56	0.60	0.64		
		YR		0.28	0.32	0.36		
	Green	XG	Ditto	0.28	0.32	0.36		
		YG		0.48	0.52	0.56		
	Blue	XB	Ditto	0.11	0.15	0.19		
		YB		0.08	0.12	0.16		
	White	Xw	Ditto	0.30	0.34	0.38		
		yw		0.30	0.34	0.38		

Note 1) Refer to "11.Measuring Method".

Note 2) The above test limit must be applied for initial use. Characteristics will be shifted by long period operation, but it is not irregular phenomena. Theoretically brightness characteristics will be decreased due to CCFL degradation and color shift due to optical components change.

*The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.



Soft View International Technology Co., Ltd.

Page No. 16/21

Document Title

LTD121LA3SG-201

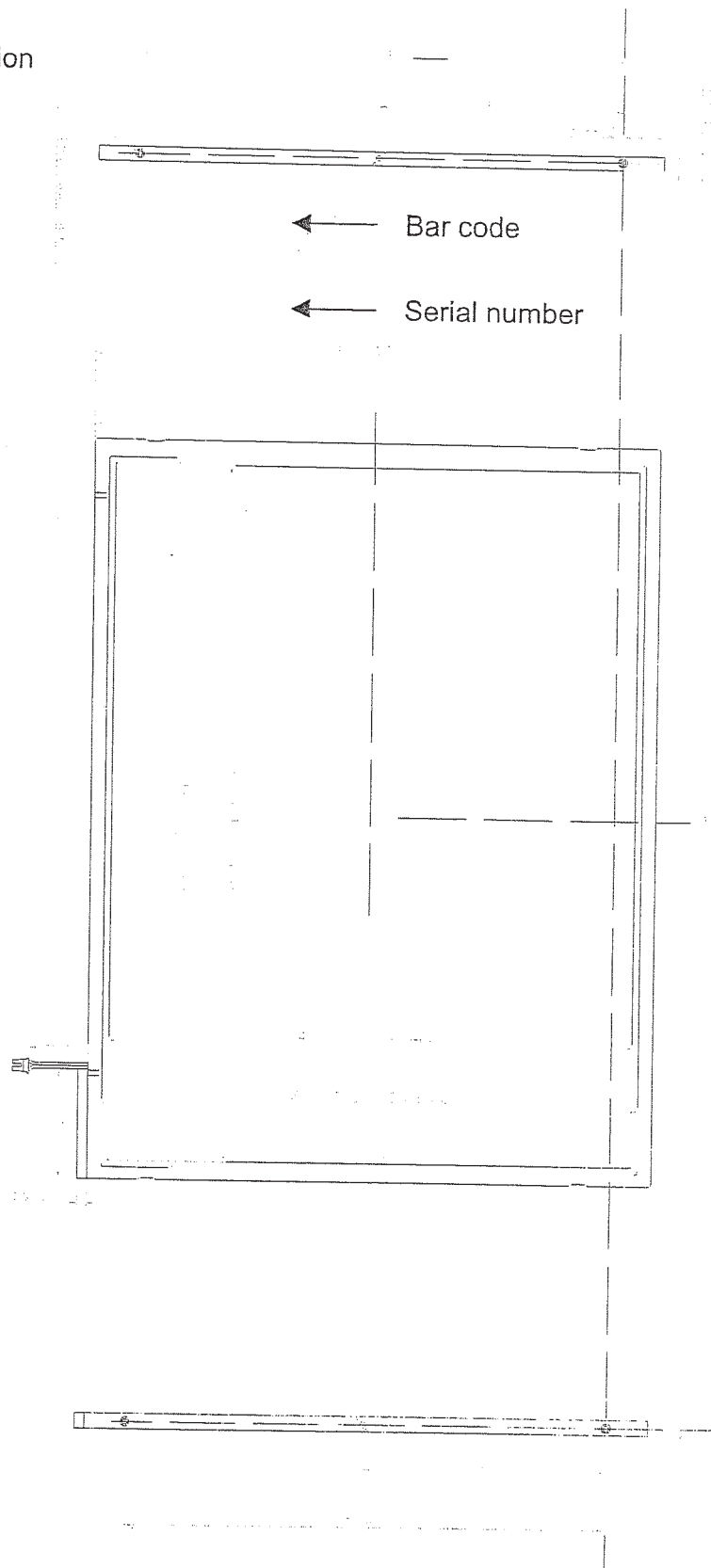
Revision

1.0

Outline dimension

Mechanical Information

2003.09.15



Unit : mm

The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.

*Soft View International Technology Co.,Ltd.*

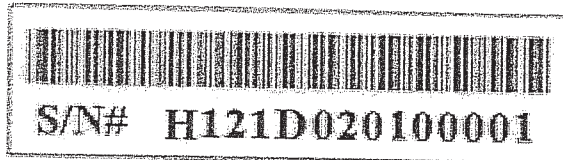
Page No. 17/21

Document Title LTD121LA3SG-201

Revision 1.0

Lot mark

Product Label



Bar code

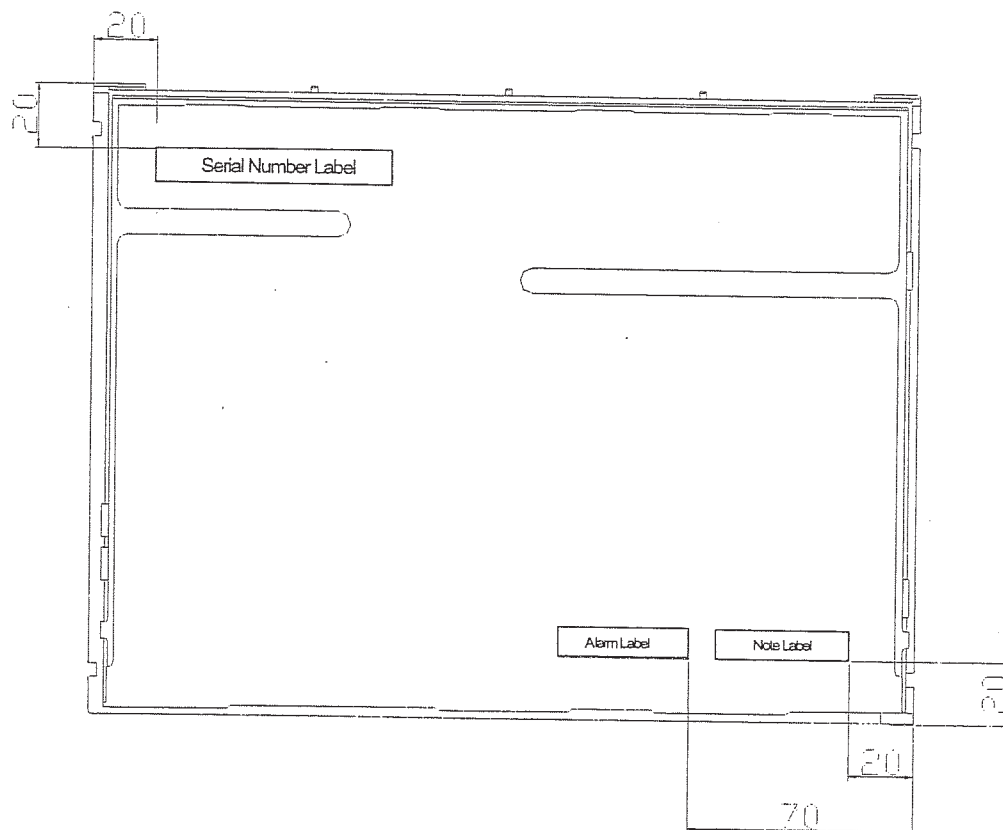
Serial number

Label indications

Bar code size : H 50 mm * L 15 mm

Meaning : Serial number

Label Locations



The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.



Soft View International Technology Co.,Ltd.

Page No. 18/21

Document Title LTD121LA3SG-201

Revision 1.0

Quality

Inspection AQL

Total of Major Defects : AQL 0.65%

Sampling Method : MIL-STD-105EG II

Test Conditions

Ambient Temperature : $25\pm 2^{\circ}\text{C}$ Ambient Humidity : $65\pm 10\%$ (RH)

Inverter : Harison HIU-766(52K)

Note : Inverter Specifications

Item	Symbol	conditions	Specifications			Unit
			Min	TYP	Max	
Lamp Current	I_L	$T=25^{\circ}\text{C}$		6	7	MArms
Lamp Voltage	V_L	$T=25^{\circ}\text{C}$		610		Vrms
Lamp Start-Voltage	V_{st}	$T=25^{\circ}\text{C}$			750	Vrms
		$T=0^{\circ}\text{C}$			1030	Vrms
Lamp Frequency	f_L	$T=25^{\circ}\text{C}$, $I_L=6\text{mA}$	47	52	80	KHz

Reliability Test

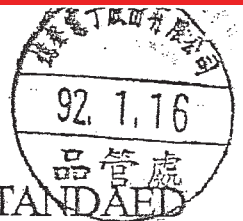
Test Item		Test Conditions	PCS	Result
Operating	High Temperature and High Humidity Operation	50°C , 90%RH 240hr	3	OK
	Low Temperature Operation	0°C , 240hr	3	OK
	High Temperature Operation	50°C , 240hr	3	OK
	Continuous Operation	30sec ON / 30sec OFF 10000hr	3	OK
	Lifetime Test	$25\pm 2^{\circ}\text{C}$, 10000hr	3	OK
Storage	High Temperature and High Humidity Operation	60°C , 90%RH 48hr	3	OK
	Low Temperature Operation	-20°C , 240hr	3	Ok
	High Temperature Operation	60°C , 240hr	3	OK
	Temperature Shock	60°C , 1hr / -20°C , 1hr 50cycles	3	Ok

The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.

ACTION ELECTRONICS CO., LTD

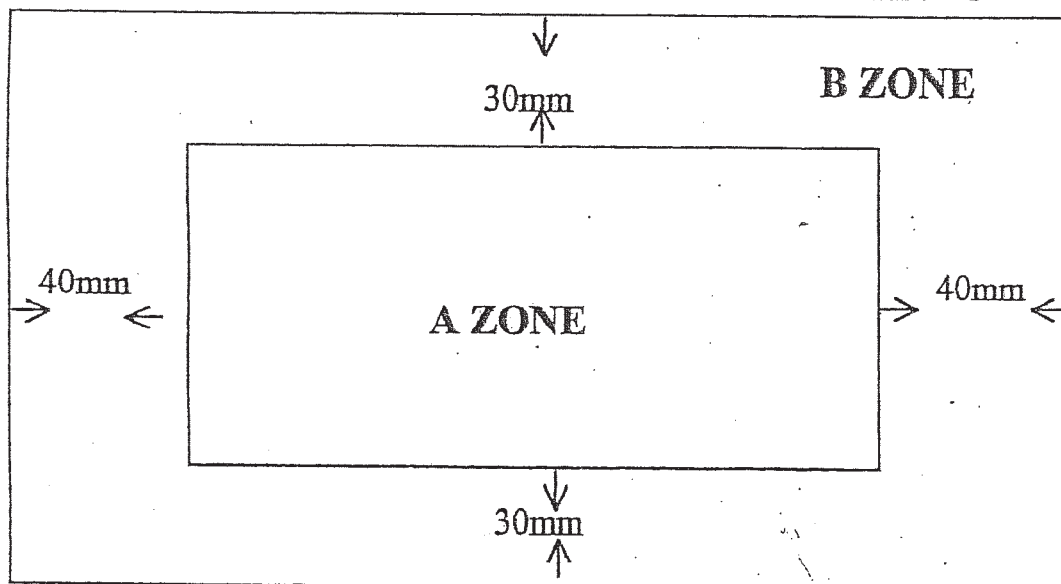
10" ~12"

COLOR TFT-LCD MODULE INSPECTION STANDARD



DATE : 2003-01-16

REV : 1



ITEM	A ZONE	B ZONE	TOTAL
BLACK	2	3	5
BLUE			
RED			
WHITE、GRE			
TOTAL	2	3	

REMARK :

1. VIEWING DISTANCE $35\text{cm} \pm 5\text{cm}$
2. VIEWING ANGLE 90 deg
3. SPOTS DISTANCE $\geq 2\text{cm}$ }
4. DIAMETER OF SPOT $< 0.1\text{mm}$ NOT ACCOUNT
5. STRAIGHT LINE OF SCRATCH WIDE $\leq 0.2\text{mm}$ NOT ACCOUNT
6. 點的直徑 $\leq 0.3\text{mm}$

ITEM	SPEC. LIMIT
DIFFUSER SCRATCH	$L \leq 5, N \leq A-1/B-2$
FOREING OR EXTERNAL SPOT	FOREING : $L \leq 3, N \leq 2$: $D \leq 0.3, N \leq 2$

N : QTY D : AVG.DIAMETER(mm) L : LENGTH(mm)

(附件一)



Soft View International Technology Co.,Ltd.

Page No. 20/21

Document Title LTD121LA3SG-201

Revision 1.0

Appearance Test

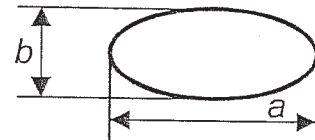
Specifications

Item	Description	Class
PCB Appearance	Pattern peeling snapping, electrically short	Major
	Repair portion on PCB is not covered by epoxy resin	Minor
Soldering	Cold solder joint, lead move when pulled	Major
Connectors	Distinct stain, rust or scratch	Minor
Black and White Spots/Lines ^{*1,2}	Line Width (MM)	Minor
	$W \leq 0.10$	
	$0.10 < W \leq 0.15$	
	$0.15 < W \leq 0.20$	
	$0.20 < W$	
	Length (MM)	Minor
	$L \leq 10$	
	Acceptable count	
	$n \leq 8$	
	$n \leq 2$	
	Average diameter (mm)	Minor
	$D \leq 0.20$	
	$0.20 < D \leq 0.50$	
	$0.50 < D \leq 1.50$	
	$1.50 < D$	
	Acceptable count/side	
	neglect	
	$n \leq 5$	
	$n \leq 2$	
	0	
Break and Crack of Panel Outside Edge	Break: less than 2MM inward from cell outside. Worsening fine crack: reject	Minor

*1, Inspection area should be within active area.

*2, Dusts which are bigger not less than 0.20mm ($0.20 < W$) shall be judged by "Average Diameter".

Average Diameter $D = (a+b) / 2$ (mm)



The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.



Soft View International Technology Co.,Ltd.

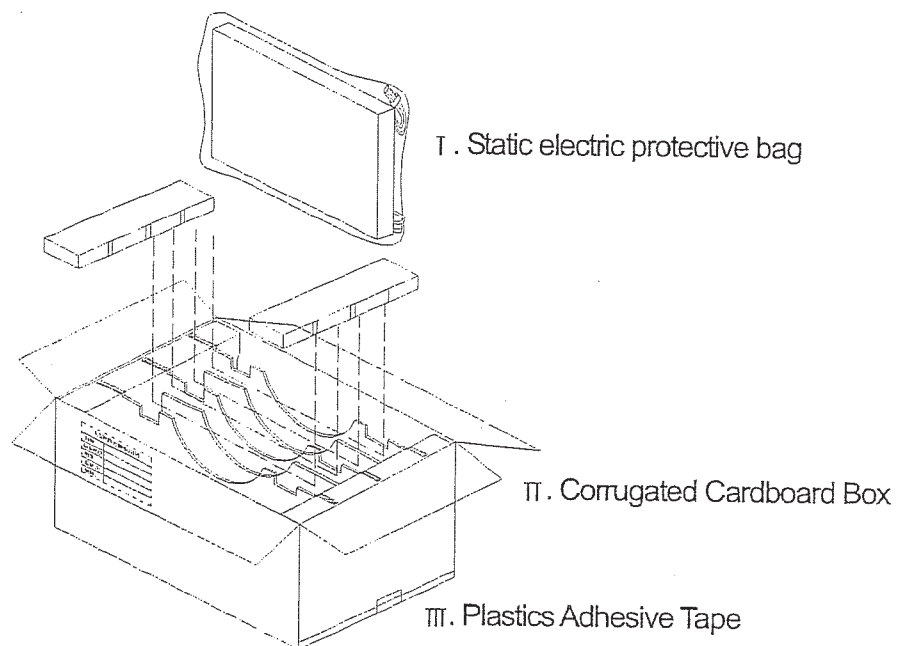
Page No. 21/21

Document Title LTD121LA3SG-201

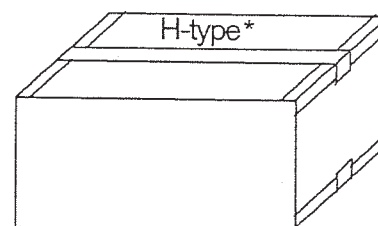
Revision 1.0

Packaging

- Packaging From Corrugated Cardboard Box.
- Packaging Method



Number	Quantity	Description
I	10 pcs	Static electric protective bag
II	1 set	Corrugated Cardboard Box
III	H-type*	Plastics Adhesive Tape



The information contained in this document is the exclusive property of Soft View International Technology. It shall not be disclosed, distributed or reproduced in whole or in part without written permission of Soft View International Technology.